

(col. 1, lines 64-65). The putty is described as “indefinitely conformable” (col. 1, line 37), as having the ability to be shaped or molded by hand with ease (col. 2, lines 44-45) and as “soft and pliable” (col. 3, lines 13-14). These properties of the putty are quantified in terms of the putty’s softness value which is “at least 4 mm preferably, at least 4.5 mm; more preferably at least 5mm; and even more preferably, at least 6 mm)” (col. 1, lines 31-33).

Thus, Welna is directed to an intumescent material having a specific and desired level of softness and moldability, and all of the compositions disclosed by Welna share this property. Welna does not recognize or appreciate the utility of an intumescent material having a softness value less than 4 mm, and it appears that such an intumescent material would not be suited for the applications for which the Welna intumescent putty was designed. Since any composition not having a softness value of at least 4 mm is undesirable according to Welna, Welna implicitly teaches away from a composition having a softness value of less than about 3.75 mm, as required by the present invention.

In addition, Welna and Annemaier fail to provide any teaching or suggestion to modify the intumescent putty to not be soft (i.e. to be hard). Rather, the disclosure characterizes the intumescent putty material in terms of its ability to be moldable, indefinitely conformable, and as having a softness value of at least 4 mm. If the intumescent putty were modified to have the softness value of the present invention, it would no longer be “putty” within the meaning of Welna. Thus, the modification suggested by the Examiner would change the essential character of the intumescent material and take it outside the scope of the Welna disclosure. Furthermore, since the purpose of Welna is to provide an intumescent putty, the Examiner’s suggested modification is inconsistent with the teachings of Welna. At the time the present invention was made, one skilled in the art would not be motivated to make the modification suggested by the Examiner. The Examiner’s rejection of claims 1-15 appears to be based on impermissible hindsight reconstruction, wherein the Examiner was able to particularly modify the prior art only because of the knowledge of the present application.

The mere fact that a reference can be modified or combined with another reference does not render the resultant modification or combination obvious unless the prior art also suggests the desirability of the modification or combination. The cited references contain no such suggestion, and the Examiner has failed to provide any convincing reasoning to support the suggested combination or modification.

In rejecting claims 1-12 as being obviousness in view of Welna, the Examiner provides as follows:

Applicants maximum softness rating of 3.75 as compared with reference's minimum of 4.0 rating is clearly obvious since: 1) Applicants utilize the same technique in making softness evaluation (applicant - pages 9 and 10 of the specification; Welna col. 6, last paragraph through col. 7). 2) Applicants only comparative flameproofing data is directed to a composition, Composition A, in Table III on pages 20-21, differing solely by its absence of graphite.

This is erroneous. The technique used to measure a property has no bearing on the obviousness of the measured property. For example, the fact that a photometer can be used to measure light generated by both an incandescent light and a neon light does not render the neon light obvious. Rather, the use of a photometer is the most convenient, accurate, and recognized technique to measure light. It is, however, irrelevant in making an obviousness determination.

The Examiner also asserts that "in order to produce a putty-like nature in its malleability and flow, yet sufficiently strong 'to withstand a hose stream test', would have had to test materials having a lesser softness rating in order to make such an assessment." This is also erroneous.

A hose stream test is performed after an intumescent material has been exposed to fire-like conditions and has expanded and/or charred. Performance of a material in a hose stream test therefore depends on the properties of material in its expanded state, not its unexpanded state. Both hard and soft firestop materials may or may not pass a hose stream test, and the softness or hardness of the material in its unexpanded state does not predict performance in a hose stream test. Rather, the overall composition determines how a material will perform in a hose stream test. Thus, contrary to the Examiner's assertion, Welna would not have had to test materials having softness values less than those described to determine which would withstand a hose stream test.

The Annemaier reference discloses a fireproofing material provided in the form of a loose mixture which is typically contained in a sealed flexible bag. The Examiner asserts that:

Since Annemaier requires no plasticizer, his composition clearly does not exhibit the softness ratings of the order Welna seeks. It is evident that faced with providing fire blocking for use in buildings such as walls and ceilings that the routineer cognizant of Annemaier's disclosure would readily appreciate that a putty nature due to the high plasticizer content characteristic of Welna's otherwise comparably constituted composition, was unnecessary to achieve adequate intumescent fire blocking properties.

Applicant disagrees. First, Applicant disagrees with the conclusion that since Annemaier requires no plasticizer, the composition would not exhibit the softness ratings described by Welna.

Annemaier is directed to a "loose mixture" (see abstract). Since the Annemaier material is a mixture of loose particles, there would be no reason to include a plasticizer, and the absence of a plasticizer in the Annemaier mixture has no bearing on the obviousness of the Welna putty. In addition, such a loose mixture may exhibit a very high softness value.

The Annemaier mixture also includes a flexibly compliant constituent that may include foamed material and fibers (col. 3, lines 13-31), further adding to the softness of the material.

Lastly, the fact that Annemaier requires no plasticizer does not provide any motivation for making such a modification to the Welna putty. Rather, it simply explains that if one were to modify the Welna formulation to have a lower softness value, it may be accomplished by elimination the plasticizer. It fails to explain, however, why one would be motivated to alter the Welna composition to obtain a lower softness value.

The present invention relates to a flexible yet solid intumescent composition that is capable of being applied in various shapes including sheets, extruded strips and other profiles. This is possible because the material has a softness value from about 0.012 to about 3.75 mm. Such a composition acts as a seal and is especially useful as a fire resistant glazing strip for metal and wood window frames, doors, dampers and shutters, and may also provide sealing where items such as plastic pipes and electrical cables pass through openings.

The material of the present invention, however, cannot be shaped or molded by hand with ease like the Welna putty, and the Welna putty cannot be applied in various shapes including sheets, extruded strips and other profiles. Thus, the claimed softness value of the present invention is important because it allows the material to be used for a wide variety of end use application for which a putty would be ill-suited.

Since the cited Welna and Annemaier references fail to teach or suggest a flexible solid fire sealing composition having a softness value of from about 0.01 to about 3.75, whether taken alone or in combination, claims 1-12 are believed to be patentable over the references. Reconsideration is requested.

Similarly, claims 13-15 are believed to be patentable over the Welna and Annemaier in view of the cited Michaeli reference because there is no teaching or suggestion to use any process to prepare a flexible solid fire sealing composition having a softness value from about 0.01 to about 3.75 mm.

If the Examiner believes there are any outstanding matters in the present application which could be resolved with a telephonic conference, the Examiner is encouraged to contact applicants' undersigned representative.

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